

REMARKS

In the foregoing amendments, claims 43-52 have been amended. Claims 27-52 remain pending in the present application. Reconsideration and allowance of all claims are respectfully requested.

I. Response to Claim Objections

The Examiner objected to claims 44-52 as including a minor informality. The objection is noted with appreciation, and the claims have been amended according to the Examiner's suggestion.

II. Response to Claim Rejection under 35 U.S.C. §112

A. 35 U.S.C. §112, first paragraph

The Office Action rejected claim 43 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement. Particularly, the Office Action stated that the "first circuit" and "second circuit" are not supported in the disclosure. Applicant respectfully traverses this rejection.

In response to this rejection, Applicant wishes to direct attention to original claim 17, which recites an "in-circuit tester." The in-circuit tester is 1) configured to provide a Test Access Port controller with a low Test Mode Select input; and 2) further configured to operationally transition the Test Access Port controller from any of at least four undetermined controller states to an UPDATE-DR state. Claim 43 has been written to substantially incorporate portions of this claim therein. For example, claim 43 is directed to a "testing circuit," which is supported by the original "in-circuit tester."

An in-circuit tester, or testing circuit, having the capacity to perform the above-noted functions (as disclosed in original claim 17) clearly conveys the concept that circuit includes some type of circuitry or logic to perform the two functions. Although the original disclosure does not recite a "first circuit" and a "second circuit" per se, it can nonetheless be inferred that the in-circuit tester, or testing circuit, includes first circuitry to accomplish the first function and second circuitry to accomplish the second function. It is believed therefore that claim 43 is directed to subject matter that is fully supported by the original disclosure.

However, in order to advance prosecution, the terms “a first circuit” and “a second circuit” have been amended to “first logic” and “second logic”, in order to more clearly define the concepts of the present application. Applicant contends that claim 43, as amended, is also directed to subject matter that is supported in the original disclosure. Therefore, Applicant respectfully requests that the Examiner kindly withdraw the rejection. Alternatively, if the Examiner cares to suggest alternative language, Applicant is welcome to suggestions.

B. 35 U.S.C. §112, second paragraph

The Office Action rejected claims 31 and 41 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Particularly, the Office Action seems to suggest that the feature of *four* listed states allegedly conflicts with the antecedent reciting “the at least three ... states”. Applicant respectfully traverses this rejection because the term “at least three states” is not limited to only three states but should be interpreted as including *three or more states*. Using the normal interpretation of this terminology, the aspect of four states clearly falls within the limitation of “at least three states” and is therefore clear and definite in the claims.

III. Response to Claim Rejection under 35 U.S.C. §102

Claims 27, 32, 35, 36, 43, 45, and 49-52 stand rejected under 35 U.S.C. §102(a) as allegedly being anticipated by Applicant’s Admitted Prior Art (“AAPA”). Applicant respectfully traverses this rejection because the AAPA fails to disclose each and every element of independent claims 27, 35, and 43.

A. Claims 27-34

Independent claim 27 is reproduced below:

27. A method comprising:

starting a boundary scan test;

transitioning a Test Access Port (TAP) controller when a ground bounce occurs during the boundary scan test, *the TAP controller being transitioned from any of at least three undetermined controller states to a determined controller state*, whereby transitioning the TAP controller to a determined controller state recovers the TAP controller from the ground bounce during the boundary scan test; and

resuming the boundary scan test when the TAP controller has been recovered from the ground bounce.

(Emphasis added)

The AAPA discloses, on p. 10, transitions from one state (UPDATE), or at most two states (UPDATE-DR and UPDATE-IR) to a known state. However, the AAPA fails to disclose the above-highlighted feature of claim 27, where the TAP controller is transitioned from any of at least three states to a determined state. The terminology “at least three” should be interpreted as three or more according to its normal interpretation. For at least the reason that the AAPA cannot transition from three or more states, the AAPA does not disclose every element of claim 27. Applicant asserts that claim 27 is thus allowable, in addition to claims 28-34, which depend, directly or indirectly, from independent claim 27. Applicant therefore respectfully requests that the Examiner kindly withdraw the rejection.

B. Claims 35-42

Independent claim 35 is reproduced below:

35. An apparatus for conducting a boundary scan test, the apparatus comprising:

at least one Test Access Port (TAP) controller; and

means for transitioning the TAP controller when a ground bounce occurs during a boundary scan test, *the transitioning means configured to transition the TAP controller from any of at least three undetermined controller states to a determined controller state* to recover the TAP controller from the ground bounce, thereby allowing the boundary scan test to resume when the TAP controller is recovered from the ground bounce.

(Emphasis added)

The AAPA discloses, on p. 10, transitions from one state (UPDATE), or at most two states (UPDATE-DR and UPDATE-IR) to a known state. However, the AAPA fails to disclose the above-highlighted feature of claim 35, where the transitioning means is configured to transition the TAP controller from any of at least three states to a determined state. The terminology “at least three” should be

interpreted as three or more according to its normal interpretation. For at least the reason that the AAPA cannot transition from three or more states, the AAPA does not disclose every element of claim 35. Applicant asserts that claim 35 is thus allowable, in addition to claims 36-42, which depend, directly or indirectly, from independent claim 35. Applicant therefore respectfully requests that the Examiner kindly withdraw the rejection.

C. Claims 43-52

Independent claim 43 is reproduced below:

43. A testing circuit comprising:

first logic configured to provide a Test Access Port (TAP) controller with a low Test Mode Select input prior to a transition from an update state; and
second logic configured to transition the TAP controller when a ground bounce occurs during a boundary scan test, ***the second logic transitioning the TAP controller from any of at least four undetermined controller states to a determined controller state*** to thereby recover the TAP controller from the ground bounce during the boundary scan test;

wherein the boundary scan test can be resumed when the TAP controller has been recovered from the ground bounce.

(Emphasis added)

The AAPA discloses, on p. 10, transitions from one state (UPDATE), or at most two states (UPDATE-DR and UPDATE-IR) to a known state. However, the AAPA fails to disclose the above-highlighted feature of claim 43, where the second logic transitions the TAP controller from any of at least four states to a determined state. The terminology “at least four” should be interpreted as four or more according to its normal interpretation. For at least the reason that the AAPA cannot transition from four or more states, the AAPA does not disclose every element of claim 43. Applicant asserts that claim 43 is thus allowable, in addition to claims 44-52, which depend, directly or indirectly, from independent claim 43. Applicant therefore respectfully requests that the Examiner kindly withdraw the rejection.

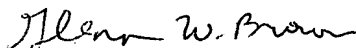
IV. **Response to Claim Rejection under 35 U.S.C. §103**

Claims 28-31, 33, 34, 37-42, 44, and 46-48 stand rejected under 35 U.S.C. §103 as allegedly being unpatentable over the AAPA in view of *Beausang et al.* (U.S. Patent No. 6,012,155). Applicant traverses this rejection because the AAPA and *Beausang et al.*, taken alone or in combination, do not teach or suggest each and every feature of the claims. Also, *Beausang et al.* fails to overcome the deficiencies of the AAPA with respect to independent claims 27, 35, and 43, as mentioned above. Particularly, *Beausang et al.* does not teach or suggest ***transitioning a TAP controller from any of at least three undetermined controller states to a determined controller state***. For at least this reason, the combination fails to teach or suggest each feature of the independent claims. In addition, Applicant contends that the AAPA and *Beausang et al.* cannot be combined as suggested in the Office Action. Even if combined, however, the combination still does not teach or suggest every element of the claims. Applicant therefore respectfully requests that the Examiner kindly withdraw the rejection and pass the application to issue.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims 27-52 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned at (770) 933-9500.

Respectfully submitted,



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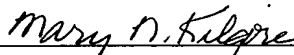
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Signature - Mary N. Kilgore